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(54) CUTTING TOOL OF SURFACE COATED TUNGSTEN CARBIDE BASED CEMENTED CARBIDE WITH ITS HARD COATING LAYER HAVING EXCELLENT INTER-LAYER ADHESION

(57)Abstract:

PURPOSE: To provide a cutting tool of coated cemented carbide with its hard coating layers having excellent interlayer adhesion.

CONSTITUTION: A cutting tool of coated cemented carbide comprises a first layer of TiN layer having granular crystal structure on surface of a cemented carbide base, a second layer of TiCN layer having vertically-grown crystal structure, a third layer of TiC layer having granular crystal structure, a fourth layer of Al₂O₃ layer having structure mainly of copper type crystal, and a fifth layer, if necessary, of TiN layer having granular crystal structure. The first layer and the second layer, or the first-third layers are formed as hard coating layer of average layer thickness 3-30 μ m in which the grain boundary contains at least W and Co of components constituting the base by diffusion.

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